# United States Patent and Trademark Office

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| 09/840,954 | 04/24/2001 | John Zhu | 50P4401.01 | 5639 |

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2132 | |

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on _13 June 2005_.

2a) ☐ This action is **FINAL**.    2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) _1-5,7-10,12-20 and 22-30_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5,7-10,12-20 and 22-30_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _24 April 2001_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1.       In view of the appeal brief filed on 13 June 2005, PROSECUTION IS HEREBY

REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following

two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37

CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental

appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other

evidence are permitted. See 37 CFR 1.193(b)(2).

### *Claim Rejections - 35 USC § 112*

2.       The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

3.       Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

4.       Claim 1 recites the limitation "messages from a client device at a local link terminal" in

lines 12-13. There is insufficient antecedent basis for this limitation in the claim. Claims

previously mention having a first and second link terminal providing data streams to the client

device and having plural client devices transmitting IP packets to plural link terminals, but the

claims do not recite messages being sent from a client device to a local link terminal. It is also

unclear if the local link terminal is intended to be one of the plural link terminals mentioned in

claim 1.

## Claim Rejections - 35 USC § 103

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.      The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.      Determining the scope and contents of the prior art.
2.      Ascertaining the differences between the prior art and the claims at issue.
3.      Resolving the level of ordinary skill in the pertinent art.
4.      Considering objective evidence present in the application indicating obviousness
        or nonobviousness.

7.      Claims 1-5, 8, 9, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Laursen, U.S. Patent No. 6,065,120, in view of Ala-Laurila, U.S. Patent No. 6,587,680.

Referring to claim 1, Laursen discloses mobile authentication system wherein a plurality of

mobile client devices are in communication with a plurality of servers over a wireless network

(Figure 1 & Col. 6, lines 5-18). The servers can be either host servers or link servers (Col. 13,

lines 19-20), which meets the limitation of plural link terminals communicating with plural client

devices. The host servers can be web servers that provide access to information stored thereon

using HTTP protocols (Col. 6, lines 15-18), which meets the limitation of at least one network

operation center including at least one application component. To establish a secured

communication between a client device and a server a mutual authentication process is

conducted between the two (Col. 9, lines 33-35). First a session request packet is transmitted

from the client device to the server (Col. 9, lines 55-64). The session request packet contains a

session ID, a device ID, and an IP address (Col. 9, line 65 – Col. 10, line 18), which meets the

limitation of receiving IP packets therefrom in respective sessions, at least some IP packets being

associated with informaiton, the information being unique to the session, the informaiton

including one session name. Once received at the server the session request is decrypted using an

encryption key and a session key is generated (Col. 11, lines 9-15), which meets the limitation of

each session being associated with a unique shared secret between a client device and a link

terminal communicating therewith. When the server receives the session request, it strips the

session ID and creates a new session ID (Col. 10, lines 1-4, 65-67 & Col. 11, lines 54-57), which

meets the limitation of logic at a local link terminal for stripping the session name from messages

from a client device. Laursen acknowledges the mobility of such wireless client devices but does

discuss how the network handles handover (Col. 1, lines 39-50). Ala-Laurila discloses an IP

based wireless network that provides multiple access points, at different locations, to the client

device to communicate (Col. 1, lines 34-55). It would have been obvious to one of ordinary skill

in the art at the time the invention was made for the link servers in Laursen's mobile

authentication system to be located at different geographic locations in order to provide

uninterrupted communications as taught in Ala-Laurila (Col. 1, lines 48-54).

Referring to claim 2, Laursen discloses that link server is coupled to a database (Figure

2B), which meets the limitation of a respective data center incorporating each link terminal.

Referring to claims 3, 29, Laursen discloses that once received at the server the session

request is decrypted using an encryption key and a session key is generated (Col. 11, lines 9-15),

which meets the limitation of logic at at least one local link terminal for generating the shared

secret.

Referring to claims 4, 29, Laursen discloses that the link server generates the session ID

(Col. 10, lines 63-67).

Referring to claim 5, Laursen discloses that there is a host server coupled to the link

server and database (Figure 2B).

Referring to claim 8, Laursen discloses that the wireless client devices have an antenna

and IP transceiver (Figure 1).

Referring to claim 9, Laursen discloses that the communication network uses schemes

such as CDMA and TDMA (Col. 6, lines 2-3), which would meet the limitation of data

transmission rate in excess of one megabyte per second.

8.      Claims 7, 10, 12-20, 22-25, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Laursen, in view of Ali-Laurila, as applied to claim 1, and further in view of Bayeh, U.S.

Patent No. 6,098,093 as applied to claim 1 above, and further in view of Rautila, U.S. Patent No.

6,549,625. Referring to claims 7, 10, 13, 16, 18, 23, 24, Laursen discloses mobile authentication

system wherein a plurality of mobile client devices are in communication with a plurality of

servers over a wireless network (Figure 1 & Col. 6, lines 5-18). The servers can be either host

servers or link servers (Col. 13, lines 19-20), which meets the limitation of plural link terminals

communicating with plural client devices. The host servers can be web servers that provide

access to information stored thereon using HTTP protocols (Col. 6, lines 15-18), which meets the

limitation of at least one network operation center including at least one application component.

To establish a secured communication between a client device and a server a mutual

authentication process is conducted between the two (Col. 9, lines 33-35). First a session request

packet is transmitted from the client device to the server (Col. 9, lines 55-64). The session

request packet contains a session ID, a device ID, and an IP address (Col. 9, line 65 – Col. 10,

line 18), which meets the limitation of receiving IP packets therefrom in respective sessions, at

least some IP packets being associated with informaiton, the information being unique to the

session, the informaiton including one session name. Once received at the server the session

request is decrypted using an encryption key and a session key is generated (Col. 11, lines 9-15),

which meets the limitation of each session being associated with a unique shared secret between

a client device and a link terminal communicating therewith. When the server receives the

session request, it strips the session ID and creates a new session ID (Col. 10, lines 1-4, 65-67 &

Col. 11, lines 54-57), which meets the limitation of logic at a local link terminal for stripping the

session name from messages from a client device. Ala-Laurila discloses an IP based wireless

network that provides multiple access points, at different locations, to the client device to

communicate (Col. 1, lines 34-55). Laursen does not disclose location-based services being

provided by the system. Rautila discloses a wireless communication system wherein location

based services are provided to a wireless terminal or device (Col. 2, lines 13-18). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to provide

location based services in the wireless network of Laursen in order to provide subscribers with

important information about their current location as taught in Rautila (Col. 1, line 34-65).

Referring to claims 12, 22, Laursen discloses that the communication network uses schemes such as CDMA and TDMA (Col. 6, lines 2-3), which would meet the limitation of data transmission rate in excess of one megabyte per second.

Referring to claims 14, 19, 20, 25, 30, Laursen discloses that once received at the server the session request is decrypted using an encryption key and a session key is generated (Col. 11, lines 9-15), which meets the limitation of logic at at least one local link terminal for generating the shared secret. Laursen discloses that the link server generates the session ID (Col. 10, lines 63-67).

Referring to claim 15, Laursen discloses that when the server receives the session request, it strips the session ID and creates a new session ID (Col. 10, lines 1-4, 65-67 & Col. 11, lines 54-57), which meets the limitation of logic at a local link terminal for stripping the session name from messages from a client device.

Referring to claim 17, Laursen discloses that the wireless client devices have an antenna and IP transceiver (Figure 1).

9.      Claims 26, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen, in view of Ali-Laurila, in view of Bayeh, U.S. Patent No. 6,098,093, in view of Rautila, U.S. Patent No. 6,549,625, as applied to claim 18, further in view of Ladue, U.S. Patent No. 6,070,070. Referring to claims 26, 28, Laursen does not disclose using accounting procedures to bill the user for the amount of packets provided. Ladue discloses a cellular phone switching system wherein the billing information is measured by the amount of packets transmitted (Col. 25, line 66 - Col. 26, line 34). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to use the accounting procedures of Ladue in the IP based wireless network

of Ali-Laurila in order to provide anti-fraud protection as taught in Ladue (Col. 26, lines 39-44).

10.     Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laursen, in view

of Ali-Laurila, in view of Bayeh, U.S. Patent No. 6,098,093, as applied to claim 1, further in

view of Ladue, U.S. Patent No. 6,070,070. Referring to claim 27, Laursen does not disclose

using accounting procedures to bill the user for the amount of packets provided. Ladue discloses

a cellular phone switching system wherein the billing information is measured by the amount of

packets transmitted (Col. 25, line 66 - Col. 26, line 34). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to use the accounting procedures of

Ladue in the IP based wireless network of Ali-Laurila in order to provide anti-fraud protection as

taught in Ladue (Col. 26, lines 39-44).

## *Conclusion*

11.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805.

The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.
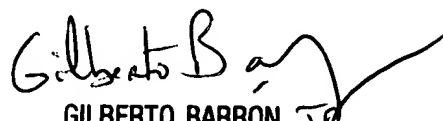
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin E. Lanier

GILBERTO BARRON JR.
SUPERVISORY PATENT EXAMINER
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